

Claims

1. A method for manufacture of a quartz glass body, in which glass starting material and fuel gas are fed to a rotationally symmetrical deposition burner (1) having several annular gap nozzles (7-9) and being formed by coaxial arrangement of a multitude of quartz glass tubes (2-5), such glass starting material in a burner flame forming  $\text{SiO}_2$  particles which, under back and forward motion of the deposition burner (1) along the longitudinal axis of a rotating mandrel (12), are deposited on such rotating mandrel under formation of an essentially cylindrical porous blank, characterized in that a deposition burner (1) is used the annular gap nozzles (7-9) of which have gap widths with a maximum dimensional deviation of 0.1 mm, and that the deposition burner (1) is co-axially encompassed and aligned to a given direction by means of an aligning device (27; 32) gripping its outer surface (35), and that the aligning device (27; 32) is connected to a shifting device (28) which brings the former into a horizontal position.
2. A method according to Claim 1, characterized in that the deposition burner is aligned by means of an aligning device (27; 32) having at least two spaced holder elements (34) with one flexible coaxial ring (33) each.
3. A method according to Claim 1 or 2, characterized in that the co-axial arrangement of the quartz glass tubes (2-5) is measured at the ends by means of a profile projector, and that the dimensional deviation of the annular gap nozzles (7-9) is determined from the results obtained.
4. A method according to any one of the above Claims, characterized in that the quartz glass tubes (2-5) are polished at the ends and then smoothed by chemical etching.

5. A method according to any one of the above Claims, characterized in that the deposition burner (1) is vertically aligned by means of the aligning device (27; 32).

5 6. A method according to Claim 5, characterized in that by means of the shifting device (28), the deposition burner (1) is positioned below the mandrel (12) in such a way that the longitudinal axis (14) of the deposition burner (1) intersects the longitudinal axis of the mandrel.

10 7. A device for realization of the method according to any one of the Claims 1 to 6, with a rotationally symmetrical deposition burner (1) having several annular gap nozzles (7-9) and being formed by coaxial arrangement of a multitude of quartz glass tubes (2-5), which is connected to a holder element and characterized in that the annular gap nozzles have a gap width with a maximum dimensional deviation of 0.1 mm, and that the holder element is provided as an aligning device (27; 32) which co-axially encompasses the outer surface (35) of the deposition burner (1) and swivels around a first swiveling axis (21) and a second swiveling axis (37), and which is connected to a horizontally traveling shifting device (28).

15 8. A method according to Claim 7, characterized in that the aligning device (27; 32) has at least two spaced holder elements (34) with one flexible coaxial ring (33) each.

25 9. A method according to any one of the Claims 7 to 9, characterized in that the quartz glass tubes (2-5) are polished at their ends and smoothed by chemical etching.

30 10. A method according to any one of the Claims 7 to 9, characterized in that each end of the quartz glass tubes (2-5) facing a burner flame intersects the longitudinal axis of the tube at right angle.

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